

Claims

1. A method for signal combining within a communication system, the method comprising the steps of:

- 5 receiving a first signal at a first finger of a receiver;
 receiving a second signal at a second finger of the receiver;
 generating a first chip stream from the first signal;
 generating a second chip stream from the second signal; and
 combining the first and the second chip streams to produce a combined chip
10 stream.

2. The method of claim 1 wherein the step of generating the first chip stream comprises the step of utilizing a buffered PN sequence to generate the first chip stream.

- 15 3. The method of claim 2 wherein the step of generating the second chip stream comprises the step of utilizing the buffered PN sequence to generate the second chip stream.

- 20 4. The method of claim 1 further comprising the step of Walsh despread the combined chip stream to produce a symbol stream.

5. The method of claim 4 further comprising the step of deinterleaving the symbol stream to produce a deinterleaved symbol stream.

- 25 6. The method of claim 5 further comprising the step of decoding the deinterleaved symbol stream.

7. The method of claim 1 further comprising the steps of:
30 receiving a third signal at the first finger of the receiver, wherein the first and the third signals are received at separate antennas;
 despreading the first and third signals within the first finger of the receiver;
 and
 combining the first and the third despread signals to produce the first chip
35 stream.

8. A method for signal combining, the method comprising the steps of:
receiving a first chip stream, wherein the first chip stream has been despread
with a Pseudo Noise (PN) code;
- 5 receiving a second chip stream, wherein the second chip stream has been
despread with the PN code; and
combining the first and the second chip streams to produce a combined chip
stream.
- 10 9. The method of claim 8 wherein the step of receiving the first chip stream
comprises the step of receiving the first chip stream output from a first finger of a
receiver.
10. The method of claim 9 wherein the step of receiving the second chip stream
15 comprises the step of receiving the second chip stream output from a second finger of
the receiver.
11. The method of claim 8 further comprising the steps of:
Walsh desspreading the combined chip stream to produce a symbol stream;
20 deinterleaving the symbol stream to produce a deinterleaved symbol stream;
and
decoding the deinterleaved symbol stream.
12. A receiver comprising:
- 25 a first finger path having a first signal as an input and outputting a first chip
stream;
a second finger path having a second signal as an input and outputting a
second chip stream; and
a chip combiner having the first and the second chip streams as an input and
30 outputting a combined chip stream.

13. The receiver of claim 12 further comprising:

a Walsh despreader having the combined chip stream as an input and outputting a symbol stream;

5 a deinterleaver having the symbol stream as an input and outputting a deinterleaved symbol stream; and

a decoder having the deinterleaved symbol stream as an input and outputting a decoded symbol stream.

14. The receiver of claim 12 wherein the first finger path comprises:

10 a first despreader having a first antenna as an input, and outputting a first despread signal;

a second despreader having a second antenna as an input and outputting a second despread signal; and

15 a combiner having the first and the second despread signals as an input and outputting a combined chip stream.

15. The receiver of claim 12 wherein the first signal is a first multipath component of a received signal and the second signal is a second multipath signal of the received signal.

20